

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-21 are cancelled.

22. (Currently Amended) Cooling system (10) for cooling heat-generating installations (44, 46, 48) and for maintaining the temperature of closed-off areas at below cabin temperature in an aircraft, with

- a refrigerating installation (12),
- at least one refrigeration consumer (44, 46, 48) constructed as a heat generating installation or as an area to be maintained at a temperature below cabin temperature and
- a refrigeration transport system (14) connecting the refrigerating installation (12) and the refrigeration consumer (44, 46, 48),

the refrigerating installation (12) comprising at least ~~one~~ two refrigeration machine machines (18, 20) which ~~covers~~ cover the maximum refrigeration requirement of the at least one refrigeration consumer (44, 46, 48) and which operate independently of one another and are coupled to the refrigeration transport system (14) in parallel, wherein and the at least one refrigeration consumer (44, 46, 48) being is supplied with cold generated in the refrigerating installation (12) via a refrigerating agent circulating in the refrigeration transport system (14), and wherein a central control unit controls the refrigeration capacity depending on at least one parameter indicating the current refrigeration demand, wherein the central control unit activates the refrigeration machines (18, 20) so that, on average, the refrigeration machines (18,20) have substantially the same length of operation in terms of time.

23. (Cancelled).
24. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that the number of refrigeration machines (18, 20) of the refrigerating
installation (12) is chosen in such a way that the refrigeration requirement of the aircraft is
covered during ground operation.
25. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that at least one refrigeration machine (18, 20) uses air inside the
pressurised fuselage of the aircraft as a heat sink for emitting heat.
26. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that at least one refrigeration machine (18, 20) generates cold by a
vapour cycle refrigeration process.
27. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that the refrigeration transport system (14) has at least one refrigerating
agent pump (32, 34) for circulating the refrigerating agent.
28. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that the refrigeration transport system (14) has at least one store (40) for
compensating for thermal expansion and leakage losses of the refrigerating agent.

29. (Currently Amended) Cooling system (10) according to claim 22,

characterised in that the at least one refrigeration consumer (44, 46, 48) has a secondary refrigeration transport system in which cold is transmitted from the refrigerating agent by means of a secondary refrigerating agent, ~~preferably air~~.

30. (Cancelled).

31. (Currently Amended) Cooling system (10) according to claim ~~30~~ 22,

characterised in that the parameters indicating the current refrigeration demand reproduce the temperature of the refrigerating agent at at least one point in the refrigeration transport system (14) or/and information on the refrigeration demand of the at least one refrigeration consumer (44, 46, 48) or/and the pressure of the refrigerating agent in the refrigeration transport system (14).

32. (Previously Presented) Cooling system (10) according to claim 22,

characterised in that the refrigeration capacity is controllable by switching on and off individual refrigeration machines (18, 20) of the refrigerating installation (12) to match the current refrigeration demand in the aircraft.

33. (Cancelled).

34. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that the refrigeration machines are controlled in decentralised manner, in particular by an automatic and time-dependent activation based on a monitoring of the actual status of all refrigeration machines via a databus.
35. (Currently Amended) Cooling system (10) according to claim 34,
characterised in that the refrigeration machines are activatable according to a predetermined prioritisation, preferably in varying order.
36. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that the refrigerating agent flows through both a switched on refrigeration machine (18, 20) and a switched off refrigeration machine.
37. (Previously Presented) Cooling system (10) according to claim 22,
characterised in that a shut-off valve is assigned to each refrigeration machine.
38. (Currently Amended) Cooling system (10) according to claim 30,
characterised in that the refrigeration capacity of the at least one refrigeration machine (18, 20) is controllable, preferably continuously, by means of the control device.
39. (Previously Presented) Cooling system (10) according to claim 30,
characterised in that the control unit detects the outflow temperature of the refrigerating agent leaving the refrigeration machine (18, 20) and activates the refrigeration machine (18, 20) in accordance with the detected outflow temperature.

40. (Previously Presented) Cooling system (10) according to claim 39,
characterised in that the refrigeration capacity of the at least one refrigeration machine (18, 20) can be altered by means of a hot gas bypass valve and/or by varying the speed of a compressor used in the refrigeration machine (18, 20).

41. (Currently Amended) Cooling system (10) according to claim ~~30~~ 22,
characterised in that to influence the refrigeration capacity of the cooling system (10) the control unit alters the amount of refrigerating agent conveyed in the refrigeration transport system (14).

42. (Previously Presented) Cooling system (10) according to claim 41,
characterised in that to influence the refrigeration capacity the control unit alters the speed of the at least one refrigerating agent pump (32, 34).